WHAT IS CLAIMED IS:

1. An information processor for generating printing data to be transmitted to a printer comprising:

5   a spooler for converting data to be printed which is generated by an application into a print job and temporarily storing the print job;

a composition instructing unit for instructing a plurality of print jobs corresponding to the different

10   data to be printed to be composed together so as to generate one composed job; and

a setting unifier for analyzing the print setting information of a plurality of print jobs when the composition instructing unit instructs the plurality of

15   print jobs to be composed together so as to obtain one composed job, and generating print setting information for the composed job in which information that can be respectively merely set to one print job is unified.

20   2. The information processor according to claim 1, wherein said setting unifier further includes a recognizing unit for recognizing to select whether the settings are unified or the print jobs are not composed together when the print setting information of a

25   plurality of print jobs to be composed together is respectively analyzed and the information which can be set only to one print job is mutually different.

3. The information processor according to claim 1, wherein said spooler converts the data to be printed into the print job of intermediate code format and temporarily stores the print job as a page description

5   file by a page unit.

4. The information processor according to claim 3, wherein information for designating the page description file laid out on a physical page is added

10   to the print setting information of said composed job.

5. The information processor according to claim 1, wherein said print setting information is temporarily stored as a print setting file of each

15   print job.

6. The information processor according to claim 1, further comprising a preview display controller for controlling a preview based on the print setting

20   information of the print jobs or the composed job to be displayed.

7. The information processor according to claim 1, further comprising an order controller for operating

25   a plurality of print jobs in said composed job to reshuffle the order of the print jobs.

8.   The information processor according to claim 1, further comprising a job cancelling unit for operating a plurality of print jobs in said composed job to cancel a specific print job.

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9.   The information processor according to claim 1, further comprising a job divider for dividing said composed job into a plurality of print jobs before they are joined together.

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10.   The information processor according to claim 1, further comprising a job duplicating unit for designating said print job or said composed job to prepare the duplication of the designated print job.

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11.   The information processor according to claim 3, wherein said print job or said composed job further includes a setting initializing unit for returning the intermediate code format as the base of the job to an

20   initial state upon preparation of the data.

12.   The information processor according to claim 1, further comprising a page editing unit for cancelling a page designated relative to a logical page

25   in said print job or said composed job.

13.   The information processor according to claim

3, further comprising a printing data generator for generating the printing data to be transmitted to said printer on the basis of the data of the intermediate code format which is temporarily stored by said
5   spooler.

14.   The information processor according to claim 13, further comprising:
     a description instruction generator for converting
10   the data of the intermediate code format temporarily stored by said spooler into a description instruction which can be interpreted by the description unit of an OS and outputting the converted data;
     a print instruction allocator for sending a print
15   instruction received through the description unit of the OS from said application to said intermediate data converter and sending the print instruction received through the description unit of the OS from the description instruction generator to said printing data
20   generator.

15.   The information processor according to claim 14, wherein said description instruction is a GDI function, said print instruction is a DDI function and
25   said printing data is a printer language.

16.   The information processor according to claim

1, further comprising a composed job information
generator for generating the layout information of said
composed job on the basis of the layout information of
a plurality of print jobs when said composition
5   instructing unit instructs a plurality of print jobs to
be composed together so as to have one composed job.

17. The information processor according to claim
16, wherein said composed job information generator
10   generates the layout information of the composed job
for each physical page on the basis of the layout
information of a plurality of print jobs.

18. The information processor according to claim
15   16, further comprising a layout unification instructing
unit for instructing the layout information of said
composed job to be unified, wherein said composed job
information generator unifies the layout information of
said composed job by all the physical pages when said
20   layout unification instructing unit instructs the
layout information to be unified.

19. The information processor according to claim
18, wherein said composed job information generator
25   unifies the layout information of said composed job to
prescribed layout information.

20. The information processor according to claim 18, wherein said composed job information generator unifies the layout information of said composed job to the layout information of the print job corresponding to a first physical page in said composed job.

21. The information processor according to claim 16, wherein said composed job information generator counts the number of logical pages of said composed job and determines the arrangement of the logical pages in the physical pages for each physical page on the basis of the layout information.

22. The information processor according to claim 21, further comprising a close arrangement instructing unit for instructing the logical pages of each print job to be closely arranged; wherein said composed job information generator determines to closely arrange the logical pages in the physical pages when a close arrangement is instructed by said close arrangement instructing unit.

23. The information processor according to claim 22, wherein said close arrangement instructing unit performs any one of a close arrangement for closely arranging the logical pages on the same physical pages, a back side close arrangement instruction for compactly

arranging the logical pages on back sides when the back sides of the same physical pages are unoccupied, and no instruction for a close arrangement by constantly changing the physical pages when original print jobs

5   are different.

24.   A method for generating printing data to be transmitted to a printer comprising:

a spooling step of converting data to be printed

10   which is generated by an application into a print job and temporarily storing the print job;

a composition instructing step of instructing a plurality of print jobs corresponding to said different data to be printed to be composed together so as to

15   generate one composed job; and

a setting unifying step of analyzing the print setting information of a plurality of print jobs when, in the composition instructing step, the plurality of print jobs are instructed to be composed together so as

20   to obtain one composed job, and generating print setting information for the composed job in which information that can be respectively merely set to one print job is unified.

25   25.   The method for generating printing data according to claim 24, wherein said setting unifying step further includes a recognizing step of recognizing

to select whether the settings are unified or the print jobs are not composed together when the print setting information of a plurality of print jobs to be composed together is respectively analyzed and the information

5   which can be set only to one print job is mutually different.

26.   The method according to claim 24, wherein said spooling step converts said data to be printed

10   into the print job of intermediate code format and temporarily stores the print job as a page description file by a page unit.

27.   The method according to claim 26, wherein

15   information for designating the page description files laid out on a physical page is added to the print setting information of said composed job.

28.   The method according to claim 24, wherein

20   said print setting information is temporarily stored as a print setting file of each print job.

29.   The method according to claim 24, further comprising a preview display controlling step of

25   controlling a preview based on the print setting information of said print jobs or said composed job to be displayed.

30. The method according to claim 24, further comprising an order controlling step of operating a plurality of print jobs in the composed job to reshuffle the order of the print jobs.

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31. The method according to claim 24, further comprising a job cancelling step of operating a plurality of print jobs in said composed job to cancel a specific print job.

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32. The method according to claim 24, further comprising a job dividing step of dividing said composed job into a plurality of print jobs before they are joined together.

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33. The method according to claim 24, further comprising a job duplicating step of designating said print job or said composed job to prepare the duplication of the designated print job.

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34. The method according to claim 26, wherein said print job or said composed job further includes a setting initializing step of returning the intermediate code format as the base of the job to an initial state

25 upon preparation of the data on the basis of the print setting information.

35. The method according to claim 24, further comprising a page editing step of cancelling a page designated relative to a logical page in said print job or said composed job.

36. The method according to claim 26, further comprising a printing data generating step of generating the printing data to be transmitted to said printer on the basis of the data of the intermediate code format which is temporarily stored in said spooling step.

37. The method according to claim 36, further comprising:

a description instruction generating step of converting the data of the intermediate code format temporarily stored in said spooling step into a description instruction which can be interpreted in the description step of an OS and outputting the converted data; and

a print instruction allocating step of sending a print instruction received through the description step of the OS from said application to said intermediate data converting step and sending the print instruction received through the description step of the OS from said description instruction generating step to said printing data generating step.

38. The method according to claim 37, wherein said description instruction is a GDI function, and said print instruction is a DDI function and said printing data is a printer language.

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39. The method according to claim 24, further comprising a composed job information generating step of generating the layout information of said composed job on the basis of the layout information of a

10 plurality of print jobs when said composition instructing step instructs a plurality of print jobs to be composed together so as to have one composed job.

40. The method according to claim 39, wherein

15 said composed job information generating step generates the layout information of said composed job for each physical page on the basis of the layout information of a plurality of print jobs.

20 41. The method according to claim 39, further comprising a layout unification instructing step of instructing the layout information of said composed job to be unified, wherein said composed job information generating step unifies the layout information of the

25 composed job by all the physical pages when said layout unification instructing step instructs the layout information to be unified.

42.   The method according to claim 41, wherein said composed job information generating step unifies the layout information of said composed job to prescribed layout information.

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43.   The method according to claim 41, wherein said composed job information generating step unifies the layout information of said composed job to the layout information of the print job corresponding to a
10   first physical page in said composed job.

44.   The method according to claim 39, wherein said composed job information generating step counts the number of logical pages of said composed job and
15   determines the arrangement of the logical pages in the physical pages for each physical page on the basis of the layout information.

45.   The method according to claim 44, further
20   comprising a close arrangement instructing step of instructing the logical pages of each print job to be closely arranged in said composed job, wherein said composed job information generating step determines to closely arrange the logical pages in the physical pages
25   when a close arrangement is instructed by said close arrangement instructing step.

46. The method according to claim 45, wherein said close arrangement instructing step performs any one of a close arrangement for closely arranging the logical pages on the same physical pages, a back side

5 close arrangement instruction for compactly arranging the logical pages on back sides when the back sides of the same physical pages are unoccupied, and no instruction for a close arrangement by constantly changing the physical pages when original print jobs

10 are different.

47. A computer-readable memory medium which stores a printing data generating program for generating printing data to be transmitted to a

15 printer, the program comprising:

a spool program code for converting data to be printed which is generated by an application into a print job and temporarily storing the print job;

a composition instructing program code for

20 instructing a plurality of print jobs corresponding to the different data to be printed to be composed together so as to generate one composed job; and

a setting unifying program code for analyzing the print setting information of a plurality of print jobs

25 when the composition instructing program code instructs the plurality of print jobs to be composed together so as to obtain one composed job, and generating print

setting information for the composed job in which information that can be respectively merely set to one print job is unified.

5   48.   The memory medium according to claim 47, wherein said setting unifying program code further includes a recognizing step of recognizing to select whether the settings are unified or the print jobs are not composed together when the print setting
10   information of a plurality of print jobs to be composed together is respectively analyzed and the information which can be set only to one print job is mutually different.

15   49.   The memory medium according to claim 47, wherein said spool program code converts said data to be printed into the print job of intermediate code format and temporarily stores the print job as a page description file by a page unit.
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     50.   The memory medium according to claim 49, wherein information for designating the page description files laid out on a physical page is added to the print setting information of said composed job.
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     51.   The memory medium according to claim 47, herein said print setting information is temporarily

stored as a print setting file of each print job.

52. The memory medium according to claim 47, further comprising a preview display controlling step of controlling a preview based on the print setting information of said print jobs or said composed job to be displayed.

53. The memory medium according to claim 47, further comprising an order controlling step of operating a plurality of print jobs in the composed job to reshuffle the order of the print jobs.

54. The memory medium according to claim 47, further comprising a job cancelling step of operating a plurality of print jobs in said composed job to cancel a specific print job.

55. The memory medium according to claim 47, further comprising a job dividing step of dividing said composed job into a plurality of print jobs before they are joined together.

56. The memory medium according to claim 47, further comprising a job duplicating step of designating said print job or said composed job to prepare the duplication of the designated print job.

57. The memory medium according to claim 49, wherein said print job or said composed job further includes a setting initializing step of returning the intermediate code format as the base of the job to an initial state upon preparation of the data on the basis of the print setting information.

58. The memory medium according to claim 47, further comprising a page editing step of cancelling a page designated relative to a logical page in said print job or said composed job.

59. The memory medium according to claim 49, further comprising a printing data generating step of generating the printing data to be transmitted to said printer on the basis of the data of the intermediate code format which is temporarily stored in said spool program code.

60. The memory medium according to claim 59, further comprising:

a description instruction generating step of converting the data of the intermediate code format temporarily stored in said spool program code into a description instruction which can be interpreted in the description step of an OS and outputting the converted data; and

a print instruction allocating step of sending a print instruction received through the description step of the OS from said application to said intermediate data converting step and sending the print instruction

5   received through the description step of the OS from said description instruction generating step to said printing data generating step.

61.   The memory medium according to claim 60,

10   wherein said description instruction is a GDI function, and said print instruction is a DDI function and said printing data is a printer language.

62.   The memory medium according to claim 47,

15   further comprising a composed job information generating step of generating the layout information of said composed job on the basis of the layout information of a plurality of print jobs when said composition instructing step instructs a plurality of

20   print jobs to be composed together so as to have one composed job.

63.   The memory medium according to claim 62, wherein said composed job information generating step

25   generates the layout information of said composed job for each physical page on the basis of the layout information of a plurality of print jobs.

64. The memory medium according to claim 62, further comprising a layout unification instructing step of instructing the layout information of said composed job to be unified, wherein said composed job

5   information generating step unifies the layout information of the composed job by all the physical pages when said layout unification instructing step instructs the layout information to be unified.

10   65. The memory medium according to claim 64, wherein said composed job information generating step unifies the layout information of said composed job to prescribed layout information.

15   66. The memory medium according to claim 64, wherein said composed job information generating step unifies the layout information of said composed job to the layout information of the print job corresponding to a first physical page in said composed job.

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67. The memory medium according to claim 62, wherein said composed job information generating step counts the number of logical pages of said composed job and determines the arrangement of the logical pages in

25   the physical pages for each physical page on the basis of the layout information.

68. The memory medium according to claim 67, further comprising a close arrangement instructing step of instructing the logical pages of each print job to be closely arranged in said composed job, wherein said composed job information generating step determines to closely arrange the logical pages in the physical pages when a close arrangement is instructed by said close arrangement instructing step.

69. The memory medium according to claim 45, wherein said close arrangement instructing step performs any one of a close arrangement for closely arranging the logical pages on the same physical pages, a back side close arrangement instruction for compactly arranging the logical pages on back sides when the back sides of the same physical pages are unoccupied, and no instruction for a close arrangement by constantly changing the physical pages when original print jobs are different.

70. A printing data generating program for generating printing data to be transmitted to a printer, said program comprising:

a spool program code for converting data to be printed which is generated by an application into a print job and temporarily storing the print job;

a composition instructing program code for

instructing a plurality of print jobs corresponding to the different data to be printed to be composed together so as to generate one composed job; and

a setting unifying program code for analyzing the print setting information of a plurality of print jobs when the composition instructing program code instructs the plurality of print jobs to be composed together so as to obtain one composed job, and generating print setting information for the composed job in which information that can be respectively merely set to one print job is unified.

71. The printing data generating program according to claim 70, wherein said setting unifying program code further includes a recognizing step of recognizing to select whether the settings are unified or the print jobs are not composed together when the print setting information of a plurality of print jobs to be composed together is respectively analyzed and the information which can be set only to one print job is mutually different.

72. The printing data generating program according to claim 70, wherein said spool program code converts said data to be printed into the print job of intermediate code format and temporarily stores the print job as a page description file by a page unit.

73. The printing data generating program according to claim 72, wherein information for designating the page description files laid out on a physical page is added to the print setting information

5   of said composed job.

74. The printing data generating program according to claim 70, herein said print setting information is temporarily stored as a print setting

10   file of each print job.

75. The printing data generating program according to claim 70, further comprising a preview display controlling step of controlling a preview based

15   on the print setting information of said print jobs or said composed job to be displayed.

76. The printing data generating program according to claim 70, further comprising an order

20   controlling step of operating a plurality of print jobs in the composed job to reshuffle the order of the print jobs.

77. The printing data generating program

25   according to claim 70, further comprising a job cancelling step of operating a plurality of print jobs in said composed job to cancel a specific print job.

78. The printing data generating program according to claim 70, further comprising a job dividing step of dividing said composed job into a plurality of print jobs before they are joined

5   together.

79. The printing data generating program according to claim 70, further comprising a job duplicating step of designating said print job or said

10   composed job to prepare the duplication of the designated print job.

80. The printing data generating program according to claim 72, wherein said print job or said

15   composed job further includes a setting initializing step of returning the intermediate code format as the base of the job to an initial state upon preparation of the data on the basis of the print setting information.

20   81. The printing data generating program according to claim 70, further comprising a page editing step of cancelling a page designated relative to a logical page in said print job or said composed job.

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82. The printing data generating program according to claim 72, further comprising a printing

data generating step of generating the printing data to be transmitted to said printer on the basis of the data of the intermediate code format which is temporarily stored in said spool program code.

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83. The printing data generating program according to claim 82, further comprising:

a description instruction generating step of converting the data of the intermediate code format

10 temporarily stored in said spool program code into a description instruction which can be interpreted in the description step of an OS and outputting the converted data; and

a print instruction allocating step of sending a

15 print instruction received through the description step of the OS from said application to said intermediate data converting step and sending the print instruction received through the description step of the OS from said description instruction generating step to said

20 printing data generating step.

84. The printing data generating program according to claim 83, wherein said description instruction is a GDI function, and said print

25 instruction is a DDI function and said printing data is a printer language.

85. The printing data generating program according to claim 70, further comprising a composed job information generating step of generating the layout information of said composed job on the basis of

5   the layout information of a plurality of print jobs when said composition instructing step instructs a plurality of print jobs to be composed together so as to have one composed job.

10   86. The printing data generating program according to claim 85, wherein said composed job information generating step generates the layout information of said composed job for each physical page on the basis of the layout information of a plurality

15   of print jobs.

87. The printing data generating program according to claim 85, further comprising a layout unification instructing step of instructing the layout

20   information of said composed job to be unified, wherein said composed job information generating step unifies the layout information of the composed job by all the physical pages when said layout unification instructing step instructs the layout information to be unified.

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88. The printing data generating program according to claim 87, wherein said composed job

information generating step unifies the layout

information of said composed job to prescribed layout

information.

5   89.   The printing data generating program

according to claim 87, wherein said composed job

information generating step unifies the layout

information of said composed job to the layout

information of the print job corresponding to a first

10   physical page in said composed job.

90.   The printing data generating program

according to claim 75, wherein said composed job

information generating step counts the number of

15   logical pages of said composed job and determines the

arrangement of the logical pages in the physical pages

for each physical page on the basis of the layout

information.

20   91.   The printing data generating program

according to claim 90, further comprising a close

arrangement instructing step of instructing the logical

pages of each print job to be closely arranged in said

composed job, wherein said composed job information

25   generating step determines to closely arrange the

logical pages in the physical pages when a close

arrangement is instructed by said close arrangement

instructing step.

92. The printing data generating program according to claim 91, wherein said close arrangement instructing step performs any one of a close arrangement for closely arranging the logical pages on the same physical pages, a back side close arrangement instruction for compactly arranging the logical pages on back sides when the back sides of the same physical pages are unoccupied, and no instruction for a close arrangement by constantly changing the physical pages when original print jobs are different.